References

Headache in Stroke: Use of the International Headache Society Classification

I wish to comment on certain aspects of the article “Headache in Stroke” by Vestergaard et al.1 According to the classification of the International Headache Society (IHS),7 “patients who develop a new form of headache (including migraine, tension-type headache, and cluster headache) in close temporal relation to a vascular disorder are coded to group 6,” termed “headache associated with vascular disorders.” Because the aim of this article was to “classify headache appearing in stroke patients . . . using the new headache classification,” I was surprised to see that the authors did not mention group 6. According to the IHS classification, headaches associated with “acute ischemic cerebrovascular disease” and “intracranial hematoma” are coded to groups 6.1 and 6.2, respectively. Headache associated with “thromboembolic stroke—symptoms persisting more than 24 hours” is coded to subgroup 6.1.2, and headache associated with “intracerebral hematoma” is coded to subgroup 6.2.1. Type of headache may be specified with the fourth digit. If headache presents with features resembling migraine or tension-type headache, a fourth digit of 1 or 2, respectively, may be added. For example, headache coded to 6.1.2.1 indicates “headache associated with thromboembolic stroke presenting with migraine features,” and headache coded to 6.2.1.2 indicates “headache associated with intracerebral hematoma presenting with tension-type headache features.” Worsening of preexisting headache is coded to preexisting headache form.

The possibility of adding the fourth digit to specify the type of headache was mentioned by the authors in a misleading way. Indeed, the diagnostic criteria provided by the IHS were not followed. Headache associated with acute ischemic cerebrovascular disease may “begin as long as two weeks after the stroke.” However, in the present study the patients were interviewed about headache occurring by up to 3 days after the acute event. No information on the status of carotid arteries was given. This would have been particularly important in patients with lateralized headache and ipsilateral infarct to exclude carotid dissection (coded to group 6.4.2).

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References

Response
It is a pleasure for us to have the opportunity to answer the questions raised by Dr De Marinis. We do agree with some of the points raised by the author but would like to add the following about the use of the IHS classification of headache.

1. Concerning the IHS classification of headache in stroke, we are well aware that headache with migraine or tension-type features are coded in different groups regarding if the headache related to the vascular episode appears for the first time or is a worsening of a preexisting headache. Patients were classified (Table 3) according to this, so the IHS criteria were indeed followed.
2. We looked at headache from 3 days before to 3 days after the stroke for two main reasons. (a) A small time span is, of course, necessary to be sure that the headache was indeed related to the vascular disorder and did not occur for any other reason. (b) Had a longer time span been chosen (eg, 14 days, which may rarely occur in stroke patients according to the IHS criteria), patients may have had difficulty remembering whether or not the headache was associated with the vascular accident.
3. It would, of course, be interesting to know the frequency of carotid dissection in the present patient material, but for practical reasons it was not possible to perform an ultrasonographic examination in all patients. Such a measure is necessary to establish the diagnosis reliably. We would like to add that although interesting, carotid dissection was not an aim of our study.

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Lobar Hemorrhages
In his editorial in the April issue of *Stroke*, Dr Molinari discussed some controversies about the mechanisms and causes of lobar intracerebral hemorrhage (ICH). I would like to comment on two issues raised by the author, (1) the relationship between
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